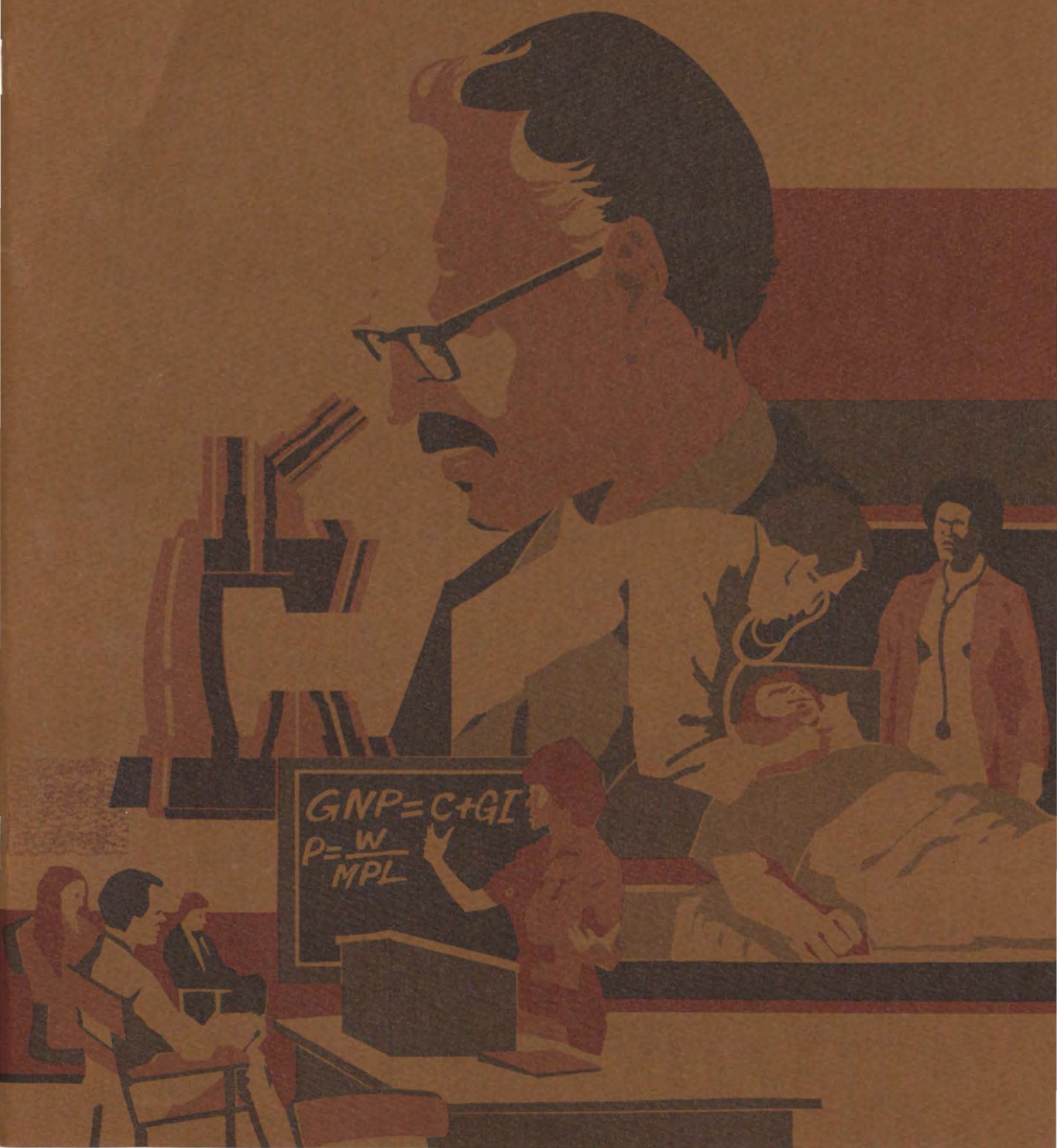


The Ohio State
University

Annual Report
1977-78



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1977-78

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The Ohio State University Annual Report 1977-78

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In the first section of this report, University President Harold L. Enarson reviews OSU's rich dividends of teaching, research, and service to the community. His report initially was prepared for presentation to the University Senate on October 14, 1978, and then revised for inclusion in this publication. Consequently, this section of the annual report contains more recent information than the latter sections covering the period July 1, 1977, to June 30, 1978.

A report on The Ohio State University

In years past I have used this annual report to review and discuss the University's problems—our financial plight, the need for expanded research efforts, declining job markets for our graduates, anticipated declines in traditional enrollment, the need to provide better for our growing nontraditional student body, the fragmented curriculum, and the deepening federal involvement in the life of the University. It will come as no surprise to you when I say that this University continues to confront and be confronted by problems. Most of the old ones have not gone away. And we have some new ones.

- One of this University's primary concerns, for example, is how best to make continuing education more available to people. How do we tailor classes, courses, staff, and facilities to meet emerging needs? How do we change traditional attitudes and academic offerings to serve new clientele?
- A second problem involves our need for substantially more money than we are getting for remodeling elements of our aging physical plant and replacing outdated scientific equipment. In the long run, we shall pay a high price for our inability to invest in major modernization.
- And we are still seeking better methods of imparting to all those who pass through the University the ability to think critically. We also look for better ways to instill interest in public life and service. Making our American experiment work must be a continuing concern for us all, in every discipline and college.
- And there are other concerns: The issue of rising tuitions, of too little dorm space, of the medical practice plan, of worsening inflation. Each of you, I'm sure, has your own perceptions of what needs attention, shoring up, elimination, modification, or expansion.

We will continue to work on these problems together. And those problems we do solve will be solved — not by isolated individuals — but by our collective effort.

In previous years I have discussed our problems at some length. I have done so by design and without apology because, in part, my job is to deal with problems facing the University. But I have sometimes been criticized for dwelling with such apparent zeal on the negative. (One learned critic has charged that I seem to be in eternal transit across the river Styx.)

OSU touches so many lives

Yet in our quieter, more reflective moments we all know that there is so much more to The Ohio State University than its problems. There is an inherent worth to this place, a worth that involves so much good, so much decent and constructive activity, touches so many lives, that it is almost unfathomable. We fail collectively at times to be publicly proud of something deserving our pride—this place, its work, and the results of its work.

As we mark the formal close of Ohio State University's 105th academic year with the issuance of this report, it is appropriate to take a moment to consider what this University is all about, to speak of the mission of a comprehensive land-grant university.

The University prepares professionals, but so do the armed services.

The University probes the secrets of the universe, but so do government laboratories.

The University operates hotels and restaurants, computer services and printing presses, but so do business and government.

The University has a system of libraries, but so do governments and large corporations.

The University provides live entertainment on the Saturdays of autumn, but so do the entrepreneurs of professional football.

The University provides instruction in hundreds of subjects in thousands of classrooms, but so do some of the giant corporations.

The University has farms and livestock, hospitals and clinics, but so do other institutions in our society.



Students at OSU have an opportunity to learn from faculty members who are outstanding authorities in their fields. Such opportunities for intellectual growth are but one of many ways in which Ohio State prepares professionals for careers and for service to the community.

Ohio State researchers go to the ends of the earth — literally. In the search for answers to humanity's pressing questions, OSU looks not only in the laboratory but also in the Arctic and Antarctic. Here a scientist from OSU's Institute of Polar Studies inspects an unusual ice formation on our southern-most continent.



All things await discovery

What then is so very special about the *idea* of a University? Very simply, the University is the chosen instrument of a free society in its search for truth. It provides no home for doctrine and dogma, for prejudice and uninformed judgment. It holds that no theory, no set of beliefs, no accepted interpretation is off limits to the inquiring mind. It holds only one belief sacred—that there is order and beauty to be found in the very grain of things—in cell and cosmos, snowflake and storm. And all awaiting discovery. It is discovery, untrammelled discovery, that the University is about. This is the bedrock faith upon which the idea of a university—any university, this University—is solidly grounded.

Our land-grant mission adds a special dimension. Our deepest faith is that of full equality of opportunity for all. In our century and more of experience, this has been the beacon and the challenge. And conscience will not let us rest until dream is converted into reality.

We are to serve the people

In an earlier America, other presidents of land-grant universities have argued that the University must reach out to the farthest reaches of the state, to the last farm at the end of a muddy road. The challenges today are largely urban and far more complex, but in essence no different. We are to put the fruits of our search, our discoveries, to the service of the people.

You sense, I'm sure, that I am struggling to express the true grandeur of the land-grant university.

The words so easily roll off the tongue—teaching, research, service—all in intimate interaction in the work-a-day life of the campus. They are not empty words, however. They remind us where duty lies, where opportunity beckons. They should also remind us of our very real strength, our many achievements.

OSU offers so much to so many

At the very heart of our achievements and our strength lie the rich, intellectual resources of this institution. Some of the nation's finest minds in a variety of fields are right here on The Ohio State University campus. These resources have been gathered over the years, and the process of investment in tomorrow continues. That's part of what our \$15 million academic enrichment campaign is all about. It represents a continuation of the selective building of scholarly and intellectual resources in fields as disparate as cancer research, jurisprudence, urban health planning, polymers, and modern German literature.

A second great attribute of Ohio State University is that it provides so many opportunities for so many people. Not just the rich few, the powerful, the extremely talented. We have our share of them, to be sure. But our mission is not nearly that tidy and narrow. This is an institution of higher learning that, like knowledge itself, belongs to all who wish to avail themselves of its riches.

Consider for a moment the intellectual wealth assembled on this campus. We have curriculum offerings in nearly every conceivable area of study, taught by a well-prepared and dedicated faculty answering the newly minted needs of 1978 and the timeless, immutable requisites of sound education.

Personal growth is OSU's rich dividend

And those who come here, who choose to exercise their opportunities, experience a metamorphosis never charted on transcripts and diplomas. Growth of the most astonishing and subtle kinds occurs here for most, and it occurs in as many ways as there are people. That growth is not neatly programmed by anyone. It is the rich

dividend that seems to happen—not always, but often enough to give evidence that the deepest values of the university idea are somehow absorbed.

This University has more than 260,000 graduates. Some of their individual stories are more impressive than others. But it is deeply rewarding to me, as I trust to the entire University family, to witness all across Ohio and the country our alumni working in their communities, contributing, involved, making a difference. There are literally thousands upon thousands of success stories involving Ohio State men and women—people who have come here, grown, matured, developed job skills, learned how to think clearly and critically. They have developed hobbies, avocations, interests. In short, a flowering has taken place. And to its everlasting credit, The Ohio State University has been a part of that flowering.

A comprehensive university has no equal

A large, vibrant university is the most exciting ambience in the world. At no time in history—from the Greek city states to Boswell's London, from pioneering America to the present—has there ever been an institution that could offer the rich intellectual resources of a comprehensive university. Never.

If you want to talk with an expert on money, migration, metabolism, Malawi, marketing, mutations, monogamy, mechanics, moraines, monarchism, molecules, medicine, Mohammed, or the Milky Way, that conversation can take place on this campus. And there are still 25 letters left in the alphabet. If you want to know what's happening, the current state of the art, what's changing and what isn't, the opportunities for the curious are greater, richer, more obtainable than ever before—right here on the campus of The Ohio State University. We often lose sight of that fact. And we sometimes forget what Ohio State University and its opportunities mean to others.

Ohio State has a magnificent asset

Our alumni—students once but citizens of the world now—hold extraordinary loyalties regarding Ohio State. I've been in airports all around the world, on the streets of London, England, and London, Ohio, in Taiwan and Saudi Arabia and Yugoslavia. Every time I take a trip I encounter someone who has graduated from this University. They are overwhelmingly proud of their association with this place. It is a deeply rooted feeling, a firm one.

This institution is clearly doing some things well, because others *do care* so much. That caring begins early, too. More of our graduates attend their own commencement exercises than at most any other school in the country. Our Alumni Association is the largest in the nation. Our Trustees, many of whom are prominent alumni, are very involved, working hard. Why? Because—for most of them—something good and worthwhile and personal happened here to them and for them.

That basic, grass-roots support is a precious thing, a magnificent asset attesting to the quality of the labors of the University family. You simply do not find that most places.

One of our problems—and I state this as an opportunity—is that we haven't been able yet to convert these positive attitudes into the kinds of legislative and fund-raising support we would like. Nonetheless, the foundation for progress is there. What the University must now do is to learn anew one of history's basic lessons—that zeal, commitment, the extension of self for a common goal, pay remarkable dividends over time. So does pride.

Our atmosphere invites progress

And one special element of this University, one in which we can all take pride, is its intellectual openness, the academic freedom that exists on this campus. It is taken for granted and it should be. A variety of people come here to speak, to test an even greater variety of ideas. There are no curbs. Voices are daily raised in anger, even incoherence, in quiet reason, or poetic gentleness. All ideas and styles are welcome at this University and they are here.

Such an atmosphere invites change and progress. There are, of course, pockets of resistance to almost everything. We can never achieve the perfectly consonant state. Nor would any of us enjoy it much if we did. Nonetheless, achievement, advancement, growth are in evidence all around us.

Especially noteworthy are the advances made in the area of research. We have a substantial

research enterprise here, whether it is measured by dollars, by the numbers of people involved in research, or by the number of dissertations produced by student-scholars on this campus. But no matter how it is measured, OSU's research efforts have grown impressively.

We reach out beyond the campus

I can speak with openness and pride of our achievements in research because, in the last analysis, I have had so little to do with them. As everyone here knows, grants are not awarded on the basis of shrill outcries of presidents, provosts, or deans. Research grows in volume and variety because faculty members with strong interests and considerable talents win awards and grants in tough competition and embrace willingly the joys and torments of research and writing.

And more is likely to happen. Increasingly our faculty men and women are being called to Washington to serve on governmental bodies, to seek grants for such things as the National Center for Research in Vocational Education, or our new Mining and Mineral Resources Research Institute, or cancer research, to name just a few.

Our Washington adventures are just one example of the University's important work beyond the limits of its campuses. Indeed, this University is at work, reaching out, touching lives in an incredible number of ways. To remind ourselves of the scope and variety of this institution's outreach efforts, let me list a few for you.

- Each year 5.6 million people are provided with vital information on business management, farming, homemaking, and nutrition through the Cooperative Extension Service that reaches into each of Ohio's 88 counties.
- The campus last year offered nearly 700 cultural or performing arts programs.



- The University's radio and television stations extended to all those in search of blessed relief an attractive informative alternative to commercial broadcasting.

- Last year 72,000 people participated in the University's Continuing Education conferences and workshops.

- Thousands of persons received some of the most sophisticated medical, dental, and optometric care available.

- And some 55,900 students are at the business of learning all the while.

The opportunity to make a difference

The thing to remember is that we've been reaching out in one way or another since 1873. Unfortunately, successful yesterdays in no way guarantee successful tomorrows. At

Ohio State, tomorrow's laurels will depend upon the motivation, preparation, and commitment of students, faculty, and staff throughout the University.

The challenges are both inviting and invigorating, because once again, in a host of ways, The Ohio State University has before it the opportunity to make a difference. And our efforts will make *the difference* between success and something short of it.

Harold L. Enarson

Harold L. Enarson, President

This satellite antenna "dish" points skyward from a permanent location near OSU's Telecommunications Center. Ohio's first satellite antenna for public radio and television stations, the device became operational in June, linking the Public Broadcasting Service with the four University stations, improving significantly the quality of video and audio signals, and reducing operating expenses.

Expanding learning

Within the limits of a year, real changes in a large comprehensive university often are barely perceptible. The broad principal missions of teaching, research, and service continue, and only the passage of time will single out the individual events that have meant new progress, directions, or emphasis in any particular period of the University's work.

Nevertheless, many developments of 1977-78 at Ohio State can be seen as centering to an important degree on one broad category—the students—their numbers and changing characteristics, their needs, and the University's new efforts to fulfill them.

Trustees seek input from students

Even before autumn classes began, Chairman John L. Gushman of the Board of Trustees set up a new Student Services Committee of three Board members. Its sole function, he said, was to improve communication and relations between students and the Trustees. He noted also that any student or group would find the committee available to meet or talk with them without having to go through the usual formalities of a regular Board session. The committee held the first of several meetings on September 9.

The 105th year of instruction began full operation several days later. In numbers, the student body again set a record with a total enrollment of 55,543. This represented an increase of 964 over the previous year's total, and President Enarson reported that "the University remains healthy in its ability to attract and retain students." The decline anticipated by many colleges had not yet affected Ohio State, which continued to experience heavy pressure for admissions at the freshman and graduate levels, he said. These enrollment statistics also had longer-range implications, since the base established will affect the University's state subsidy eligibility through the next biennium.

More women students on campus

New first-quarter freshmen increased 4 percent from the previous autumn and numbered 12 percent more than five years ago. An increase of 396 graduate students to a total of 9,334 reversed a decline noted in 1976. Moreover, enrollment gains for two other categories—women and nontraditional students—appeared particularly significant.

Women have been studying at Ohio State since its earliest days, but in the autumn of 1977 they represented 44.4 percent of the student body, the largest percentage since World War II. The number of women on the campus rose 1,121 while the men's enrollment fell 157. In the Division of Continuing Education's Credit Nondegree Program—sixth-largest enrollment unit on the campus with more than 2,000 students—more than half were women.

There was stronger emphasis, too, on the so-called nontraditional student, who does not follow the long-established pattern of enrollment at age 17 or 18 and graduation four years later. The nontraditional student is usually older, may be fully employed or at least partially so, have a family, may "stop out" repeatedly from his study schedule, or may need to return to the campus as an adult because of career demands.

Some 12,000 students were over 24 years old—nearly a quarter of the enrollment—and enrollments in the Division of Continuing Education were up 294 percent over the past decade.

Simplified procedures aid adult students

The University responded to these changes in a number of ways and continues to do so.

For example, simpler application and registration procedures were established for adult, evening, and part-time students. Plans were laid for an administrative reorganization of all of the University's continuing education programs.

Enrollment



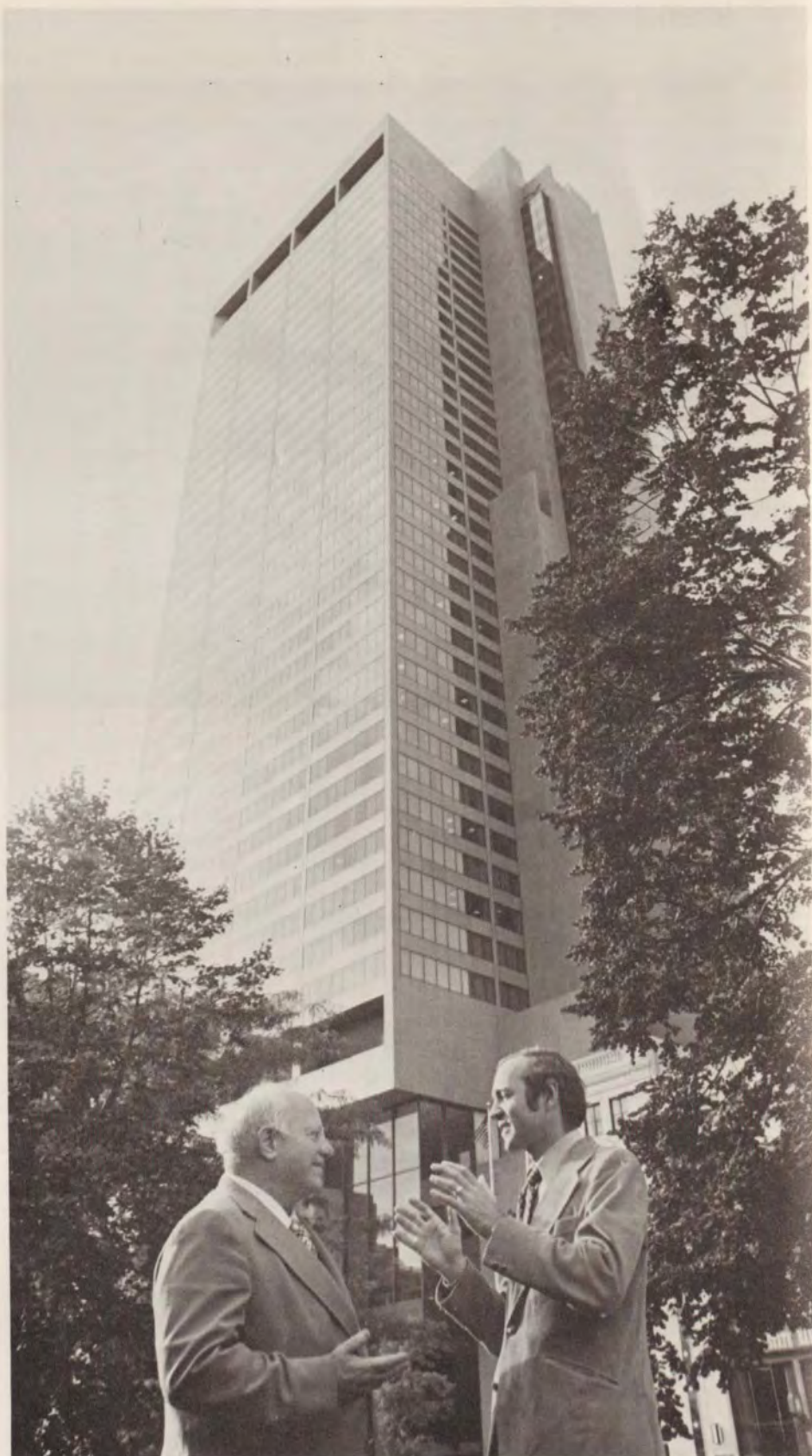
Autumn Quarter	1972	1976	1977
Columbus Campus	45,963	49,846	51,002
Other Campuses*	4,077	4,733	4,541
Total	50,040	54,579	55,543

* Regional Campuses at Lima, Mansfield, Marion, and Newark; Agricultural Technical Institute at Wooster; Ohio State University Graduate Center at Dayton.



More women were studying on the OSU campus in the autumn of 1977 than at any time since World War II. When official 14th-day enrollment tallies were completed, women represented 44.4 percent of the student body, an increase of more than 1,000 persons. Women have studied at Ohio State since its founding. A woman was among the first class of students to begin studies in 1873, and the first woman graduate was recorded in 1879.

Ohio State moved into downtown Columbus during the year, offering courses in public administration in the State Office Tower for the convenience of those in state government and others working downtown. Instructors are faculty members with senior-level administrative experience in government agencies. By the way, the faculty member is on the right. The man on the left is a student in Program 60. This program makes OSU courses available to senior-citizen guests of the University at no charge and without credit.



A two-year Executive Master of Business Administration Program provided classes on alternate Fridays and Saturdays for the convenience of experienced management-level business people. In the program's first year, 32 students, three of them women, participated.

A bachelor of science degree program in mining engineering was re-established in response to needs of employers in Ohio and elsewhere. The program is broad-based but career-oriented.

OSU begins courses downtown

The School of Public Administration announced that it would begin offering courses in the State Office Tower for the convenience of those in state government and others working in downtown Columbus. The objective is to provide opportunity for earning graduate credit with little disruption of work schedules. Instructors will be faculty with senior-level administrative experience in government agencies.

Graduate course offerings in the College of Education increased at the four regional campuses. Students unable to attend the Columbus Campus have the opportunity to earn all but 12 credit hours toward a master's degree in education at these campuses.

The College of Humanities was in its third year of developing a highly flexible system of individualized and self-paced foreign language instruction especially suitable for the nontraditional student. Future accessibility to the system will be increased through development of home telephone access to tapes and distribution of materials to public libraries.

High school math skills receive a boost

There were events that focused on the traditional student as well.

Results of an experimental project conducted at Westland High School in Columbus gave University officials increasing hope that skills of

incoming freshmen will begin to rise. Since 1970, the academic skills and proficiencies of new freshmen in English and mathematics had declined severely, and the University has attempted to meet the problem with remedial courses on the campus.

In the Westland project, the Department of Mathematics gave the high school juniors an equivalent Ohio State mathematics placement test. On the basis of test results, Westland teachers and counselors recommended specific mathematics courses for each student's senior year. Since then, enrollment in Westland's mathematics courses has doubled, and students are obtaining better preparation for university-level work.

Top scholars pick OSU

In another direction, the University continued its efforts to attract students of high academic caliber. In its third year as a college sponsor of National Merit and National Achievement Scholars, Ohio State ranked sixth in the nation in the number of new students enrolled and 15th in the total number of enrolled college-sponsored scholars. The anticipated enrollment of another 100 college-sponsored scholars the next autumn would give the University a total of nearly 300 of these outstanding students. A few years ago only 15 or 20 enrolled annually.

Also in 1977, the Ohio Legislature created \$1,000 scholarships for 1,000 college-bound high school seniors. Of the Ohio Academic Scholarship recipients for 1978, nearly 20 percent chose to attend Ohio State.

Gifts enhance teaching

Other highlights of the academic year:

- Enrollment shifts among colleges appeared in general to coincide with national trends in students' vocational concerns. Largest increases were found in Engineering, up 18.2 percent; Administrative

Science, up 10.2 percent; and Continuing Education, up 8.5 percent. Enrollment declines were in Social Work, 9.7 percent; Architecture, 8.7 percent; and Arts and Sciences, 6.6 percent.

- Five new endowed faculty positions were established during the year through major gifts or bequests aimed at enhancing the teaching program. They were the John W. Galbreath Chair in Real Estate, S. Robert Davis Chair of Medicine, Ervin G. Bailey Chair in Energy Conversion, Ernst & Ernst Professorship in Accounting, and James W. Shocknessy Professorship of Law. (Additional information appears later in this report.)

- A poll of deans from all accredited schools of business with MBA programs recently ranked the College of Administrative Science in the top two dozen of nearly 200 schools and nationally in the top 10 "most improved schools, 1977."

- The College of Dentistry's dental degree program and five specialty programs received full accreditation from the American Dental Association after receiving conditional or provisional approval in 1976. The ADA's Commission on Accreditation of Dental and Dental Auxiliary Educational Programs commended the college for its positive approach in dealing with its problems—a task made possible with supplemental appropriations received from the Ohio General Assembly.

- The Board of Trustees approved criteria for a faculty professional leave program. First leaves ranging from one to three quarters were granted with the objective of encouraging increased scholarly competence.

The quest for new discoveries

Outstanding research is just as important as fine teaching, and the University's research activities reflect this belief. Both the number and value of contract and grant awards received by the University for sponsored programs reached record levels in fiscal year 1977-78.

Proposals for new and continuing projects by faculty and staff successfully competed with those from other colleges and universities around the country, resulting in more than \$43.5 million awarded to the University on the basis of our quality and expertise. This represents about a 42 percent increase over last year's \$30.8 million.

With the exception of several small programs, there are few new federal programs for 1979 to which continued growth at the University might be coupled. Except for further involvement with Department of Energy and energy programs of other federal agencies, sustained growth in OSU's sponsored programs probably rests with gaining maximum funding from the Department of Health, Education, and Welfare and the National Science Foundation.

Some of the increase in research activity may have stemmed from the Report of the Task Force on Research released in spring 1977. The report examined the quality of research at the University and recommended improvements. Provost Albert J. Kuhn explained to the University Senate this spring that the administration will keep the major issues raised by the report "on the front burners of University discussion."

Several actions have been taken to carry out some of the recommendations of the report. Self-studies of current academic programs are well under way, assessing what individual programs do and how well they operate. Also under way is the faculty professional leave program.

New achievement awards planned

The Board of Trustees adopted a policy requiring the periodic review of all academic administrators, monitoring performance and thereby ensuring more effective academic leadership. Faculty achievement awards in research, similar to the Distinguished Teaching Awards, are planned for 1978-79. Additional awards for outstanding research among graduate students will be given.

A special research budget, administered through the Graduate School, increased 17 percent. These funds provided support for visiting professorships, inter- and multi-disciplinary centers, a faculty small-grant program, and new equipment.

Cancer research gains increased support

Perhaps the most widespread and closely coordinated research effort on campus deals with the causes and treatments of cancer. The Ohio State University's Comprehensive Cancer Center received a three-year renewal of its National Cancer Institute support grant this year. This reflects a 20 percent increase over the past year in the total program in cancer research and control. The center, one of 18 in the country, serves more than 18 million people in Ohio, West Virginia, eastern Kentucky, and western Pennsylvania.

The Cancer Center also received a \$1.7-million grant to help build a new laboratory facility. An additional \$1 million was provided from state appropriations to build the structure, which is expected to contain specialized research laboratories to handle the complex problems of treating and examining cancer.

Current cancer research under way includes projects on new anti-cancer drugs, cancer detection through improved physiological tests, and reinforcing the body's own immune system against tumors.

Vo-ed becomes national center

This year, the U.S. Office of Education designated the University's Center for Vocational Education the National Center for Research in Vocational Education. Along with a new name, the center received \$4.5 million in operating funds, support that can be renewed annually through 1982. This was the largest dollar-volume annual contract in the University's history and the largest single contract ever awarded by the Office of Education.

The center conducts research on such national concerns as youth unemployment, equal educational opportunity, career choices, and educational possibilities for the disadvantaged. OSU's center serves as a central clearinghouse for the collection and distribution of vo-ed research and development information, publications, and materials. It also works with states to evaluate existing programs.

Unique institute aids utility commissions

The National Regulatory Research Institute, located in the College of Engineering, provided unique research assistance to state utility commissions which must regulate public utilities. Around the country, public service commissions have been swamped with rate increase requests during the last few years. Through a more than \$1-million grant from the U.S. Department of Energy, NRRI is providing the facts and figures that enable these state groups to make sound judgments on rate increase requests.

Elsewhere on campus, the Center for Human Resource Research worked on a contract of almost \$5 million from the U.S. Department of Labor to continue a national survey on the labor force for the next five years. Ohio State began the federally funded labor surveys in 1965 to examine labor force participation of four groups of male and female workers. The continuation of the survey covers two new groups of 6,000 men

and 6,000 women between the ages of 14 and 21. Researchers hope to use this survey to evaluate federally funded employment and training programs for youth.

Bionic bug aids handicapped

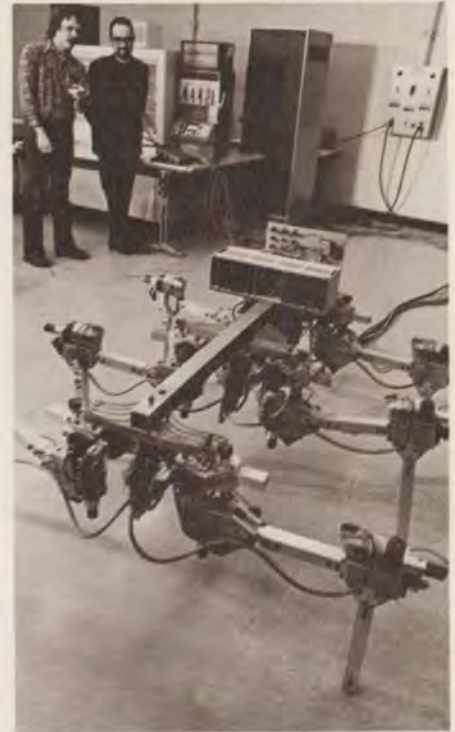
The national spotlight again shown on Ohio State in April when U.S. Senator William Proxmire selected a long-standing College of Engineering research project for his less-than-complimentary Golden Fleece award. However, the project, dubbed the bionic bug by its creators, received favorable national and state publicity as reporters explained how the research was providing new breakthroughs in prosthetic devices for the handicapped. The National Science Foundation, which funded a small portion of the research, and other Washington officials came to the University's defense. Artificial limbs, fitted with devices similar to those on the Ohio State "bug" may provide double amputees hope of walking, according to Veteran's Administration spokesmen, including VA Director Max Cleland, a triple amputee.

The University is making a special effort to publicize better the value and need for research and to improve the public's understanding of university research.

Energy researchers find new ways

One area of university research that enjoys wide public understanding and support is energy. Ohio State researchers are finding ways to tap new resources and better conserve old ones. Either through designing new methods of insulating florists' greenhouses in winter or using microbes to remove impurities from high-sulfur coal, these researchers are finding solutions to immediate problems.

One grant from the Ohio Department of Economic and Community Development to the Program for Energy Research, Education, and Public Service has researchers



Ohio State's large six-legged mechanical bionic bug gained national attention as a Golden Fleece award winner from U.S. Senator William Proxmire. The less-than-complimentary honor focused attention on this engineering project, but Veterans Administration officers, among others, announced the work was an important step toward developing better prosthetic devices for the handicapped.



Scientists on board the research ship Hydra keep track of happenings in Lake Erie. The Center for Lake Erie Area Research (CLEAR) monitors and analyzes the water quality of the Great Lakes. Nearly \$1.5-million worth of projects related to the Great Lakes are under way through CLEAR and the College of Biological Sciences.

investigating the ways Ohio cities save energy through their purchasing practices. They are working towards pulling together the resources of the state's community and technical colleges as advisers to the purchasing agents for their local communities. Researchers hope to provide all Ohio cities with purchasing and energy-saving guidelines.

The work of Ohio State's unique interdisciplinary Institute of Polar Studies continued at sites in South America, Alaska, and Antarctica. Researchers completed three years of field work on the effects of possible oil spills on the Alaskan tundra. Observations continue on Mt. Erebus, an active volcano on Ross Island, and into the evolution of a mountain chain on the northern end of the Antarctic peninsula.

In the College of Biological Sciences, the Center for Lake Erie Area Research is continuing its almost \$1.5-million group of projects monitoring and analyzing the water quality of the Great Lakes. A two-year study began investigating the biological effects from the operation of the Davis-Besse Nuclear Power Station on Lake Erie. The results of the study should serve as a guideline for other nuclear power plants proposed along the shore.

Rediscovering forgotten mines

Engineering researchers developed a special kind of radar-like device that enables them to locate abandoned coal mines and other underground features. The unit allowed mapping of several forgotten mine passages discovered last winter in a schoolyard in eastern Ohio. The device was designed to locate buried plastic pipelines and underground structures. The researchers also attached one of the detectors to a backhoe to stop the machine if it is about to dig into a buried cable or pipe.

The Disaster Research Center, the only one of its kind in the country, is looking at disasters involving chemical hazards. Supported by the National Science Foundation, the study is examining 18 communities'

preparations for this type of disaster, actual incidents involving chemical hazards, and the long-range consequences of these events.

Elsewhere on campus, other researchers are searching for new knowledge and solutions to man's problems. One entomologist is looking at the ways certain viruses attack and damage species of insects. By learning how these viruses attack the insect's body, the researcher hopes to apply this information to use in controlling insect pests.

Cancer Center tests bacteria, vaccine

Several researchers, working under grants from Ohio State's Comprehensive Cancer Center, are testing the effectiveness of using specific bacteria and other bacterial poisons as antitumor agents. One faculty member is developing a new vaccine for use against a tumor. The suggested vaccine would be only a one-time treatment against a specific tumor in much the same way aspirin only treats a single headache, not all subsequent attacks. Tests are continuing on this project in laboratory animals.

Faculty in the College of Mathematical and Physical Sciences successfully produced the lowest temperatures ever reached with a new ultralow temperature facility constructed during 1977-78. The machine cooled a rare isotope of helium to within four ten-thousandths of a degree above absolute zero (-273°C), nearly three degrees colder than outer space. The facility will be used to study a fourth state of matter beyond the familiar solid, liquid, and gas forms. Researchers are studying the properties of this new "superfluid" state.



Engineering researchers developed this special radar-like device that enables them to locate buried plastic pipelines, abandoned coal mines, and other underground structures. With this device, they were able to map several forgotten mine passages discovered last winter beneath a schoolyard in eastern Ohio.

Providing public service

Because service—along with teaching and research—is one of the hallmarks of the land-grant university, OSU continued to reach out into the community in a variety of ways, providing a wide range of assistance to those who look to this University for leadership, expertise, and help.

Continuing education for the future

Since the future all too quickly becomes the present, OSU began plans during the past year to take several major steps in the administration and marketing of its evening courses and degree programs. With nearly a fourth of OSU's enrollment consisting of persons who are past the traditional college age, it has become apparent that providing expanded and improved continuing education opportunities for these adult students is the wave of the future.

Ohio State sees a great need to move boldly into this market and to devise innovative methods of reaching and teaching the adult student who is strongly goal-oriented and who faces many competing demands for his or her time, including a full-time career and a family. The new simplified application and registration procedures for adults who are continuing learners and the planned administrative reorganization of all continuing education programs are but a beginning in this area.

Ohio State's response to the educational needs of adults is heightened by the prospect of declining enrollments of traditional college-age students. A sharp drop in the number of Ohio high school graduates has been predicted to occur in three years. As these demographic tides carry the University along into tomorrow, OSU already is responding.

Evening program aids nontraditional students

Significantly, the great need to move in this direction did not catch OSU unawares. In this report a year ago, University President Harold L. Enarson addressed the genuine need to increase the University's enrollment of nontraditional students.

"It is essential that we broaden our evening program and adapt our procedures to better serve the needs of the nontraditional student. There need be no sacrifice of standards or quality. But we must be prepared to take turns in teaching evening courses, even at some possible cost in personal convenience," he said.

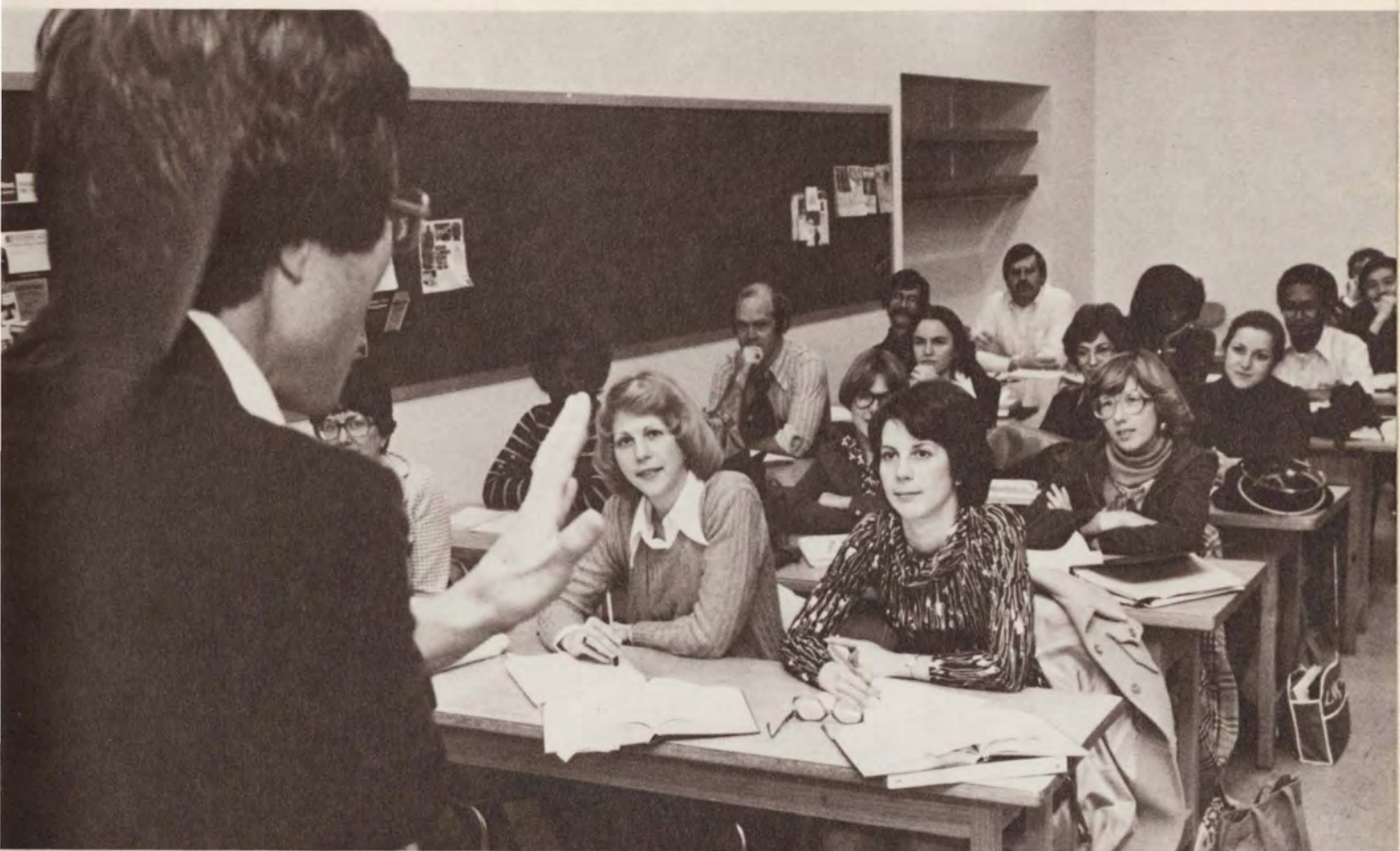
These continuing learners—most often adults over 24—seek college courses for a variety of reasons and at various times in their lives. Some need higher education for job advancement, renewal of professional certification, increased employability, or career change. Other adults find in college courses a way to widen horizons, grow intellectually, and find personal fulfillment through the adventure of learning.

OSU's partnership with Ohioans

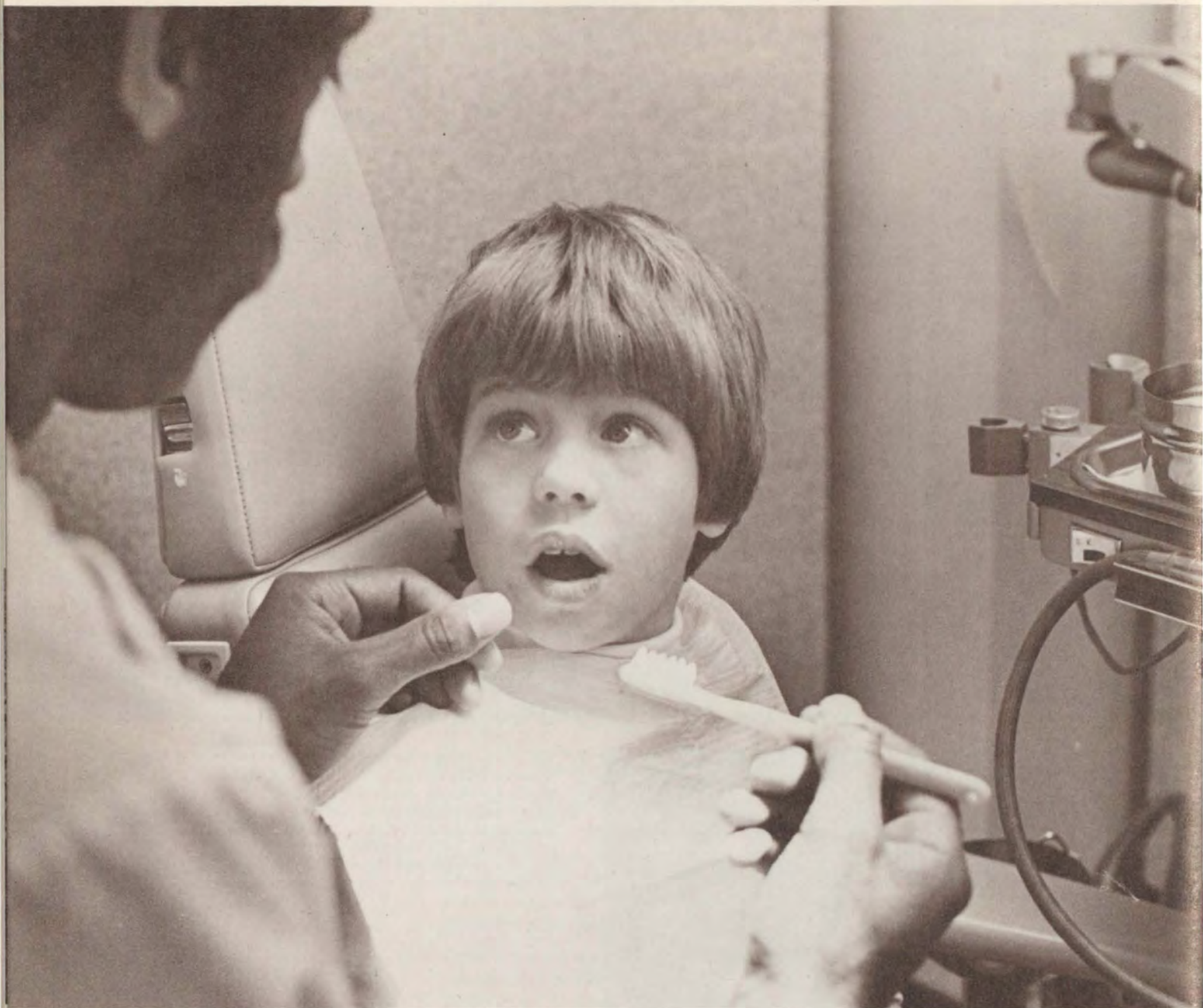
The University's re-evaluation of its existing procedures grew out of the realization that these adult students have adult perspectives and values. As a result, they are impatient with OSU's usual enrollment procedures and with course content designed for less-experienced students. Moreover, these students are under great economic pressure and are in a hurry to take the next step forward toward a better life for them and their families.

As Ohio State moves into the world of the future, the University regards the development of this continuing education market as another opportunity to serve the community and to strengthen OSU's partnership with the people of Ohio.

Besides responding to the genuine public need to expand OSU's opportunities for traditional



With the number of nontraditional students — those over 24 years of age — increasing, Ohio State took several steps during the year to improve and expand the opportunities available to these continuing learners. Nearly a fourth of OSU's enrollment consists of students who are past the traditional college age.



One of the more obvious ways in which Ohio State provides service to the community is through the quality health care programs the University provides. Students working under the guidance of faculty members provided dental care for 140,000 patient visits. Thousands of other persons were served through the University Hospitals, University Hospitals Clinic, and two optometry clinics.

students, the University has continued to fulfill its land-grant mission of service to the community in a variety of other ways during the year.

Quality health care aids patients

For example, the University provided a wide range of health treatment for many patients in the central Ohio area.

Quality health care is the prime concern of University Hospitals where 29,452 admissions and 30,254 emergency room visits were recorded for 1977. An additional 232,409 outpatient visits were recorded at University Hospitals Clinic, with more than 40,000 of these visits being cancer related. Nearly 14 percent of hospital admissions were cancer related. Interdisciplinary cooperation in cancer therapy, combining surgery, radiation therapy, chemotherapy, and immunology, resulted in individualized therapy methods tailored to each cancer patient's needs.

A 20-bed Interdisciplinary Oncology (tumor) Unit staffed by nurses, dietitians, and pharmacy technicians provided specialized care for nearly 700 patients during the year.

Dentists, optometrists serve the public

Working under the guidance of faculty members, students in OSU's dental clinic provided dental care for more than 140,000 patient visits.

Faculty and students from the College of Optometry treated patients at two optometry clinics, recording a total of 37,598 patient visits for eye care during the 1977-78 academic year.

Pets, other animals get health care

With Ohio State having the only college of veterinary medicine in the state, the University provides health care benefits to animals as well as humans. OSU's Veterinary Hospital treated nearly 26,000 large and small animal patients, ranging from family pets to prize race horses to gorillas from the Columbus Zoo. At the same time, the ambulatory service for farm animals made more than 10,000 farm visits in Franklin, Union, Delaware, and Madison Counties. In addition, the service conducted preventive medicine programs for herds and flocks.

Taking education to the people

In addition to its health services, OSU provided a number of educational services and opportunities in other areas as part of its continued land-grant commitment to service.

The Telecommunications Center reached an audience of more than nine million persons through WOSU-AM and -FM radio and nearly three million through WOSU-TV. In addition, Portsmouth area residents received programming through WPBO-TV. The center's recently completed Satellite Receiving Station will provide additional channels of program service and greatly improved audio reception for the University stations.

Moving even further off the campus, faculty members from the Ohio Cooperative Extension Service were in contact with more than 5.6 million persons last year while providing new information on farming, business management, and homemaking. Faculty in comprehensive community planning alone met with more than 38,000 local leaders on the role of the individual versus society in land-use decisions.

Cutting energy consumption

Another Extension Service project is aimed at learning new ways to reduce energy consumption. Funded with a \$280,000 grant from the Ohio Department of Energy, a pilot project was started in Allen, Lucas, and Williams Counties to help develop guidelines for a similar nationwide program.

Active in yet another area—the Expanded Food and Nutrition Education Program—Extension personnel helped 8,400 low-income families in 48 counties with instruction on better food and nutrition practices.

Other instructional opportunities were available through the Division of Continuing Education which scheduled more than 950 workshops, conferences, short courses, and other programs in which 72,742 persons participated.

Through these and many other efforts, the University extended its resources and expertise in response to community as well as individual needs during the year.

Managing and planning

The physical campus

Construction activity continued throughout the University last year to accommodate needs for specialized facilities, provide needed expansion and renovation of existing buildings, and ensure more energy-efficient use of University facilities. During the year 21 projects totaling \$14.9 million were completed, with another 17, at a cost of \$57.6 million, in progress.

Among projects completed and put into use were a \$4.5-million addition to the Main Library, a \$1.5-million expansion of the Pharmacy Building, and on the Mansfield Campus, a \$1.95-million physical education facility. The Administration Building was remodeled to house the academic departments of geography and sociology. Two projects were related to energy conservation—an expansion of the Central Campus Energy Control Center and utility modifications in various campus buildings.

Nearing completion were a \$4-million academic building at the Agricultural Technical Institute, Wooster; a \$2.3-million physical education building at the Newark Campus; and in Columbus, a new bridge over the Olentangy River joining the Campus Loop Road with Cannon Drive.

The largest construction project under way was the \$40-million addition to University Hospital, Rhodes Hall. Others currently proceeding include a \$3.5-million music addition to Mershon Auditorium and a \$1.8-million renovation of historic Hayes Hall. Planning work continues for a \$13.5-million Agronomy, Natural Resources, and Plant Pathology Building and for a \$13-million renovation project for the University Hospitals.

The future campus

Development during the year that looked to the future of the physical campus involved work on master plans for two important University areas and the completion of capital plan studies for the next decade. These plans were drawn in the Office of Budget and Resources Planning with the participation of many other offices.

Master plans for the Health Sciences Center and for the Don Scott Field (OSU Airport) area were nearing completion as part of a full review of the entire campus master plan. For Ohio State's Health Sciences area, the plan will make significant recommendations on the role of the center in health care delivery, including such activities as the Comprehensive Cancer Center, extended care and alternate care facilities, medical research, and a health maintenance organization. In addition, the plan will make detailed recommendations for each of the colleges and schools in that area and for the entire physical environment of the center.

The recommendations will deal not only with new buildings and interconnection of new and existing facilities but also with aspects of improved traffic access, parking, circulation, and visitor orientation.

The planning study for Don Scott Field addresses a variety of proposals for improving the environment for users of the field. It will deal also with shared use of the area by the colleges of Engineering and Agriculture and Home Economics. The study anticipates that expected growth of aviation programs can occur without major runway changes.

In June the Board of Trustees approved a request for \$47 million in capital projects for the coming biennium. Again the proposals were directed primarily toward renovation, rehabilitation, or replacement of existing facilities, or toward meeting specialized needs.

Although the projects were proposed specifically for the 1979-1981 period, they also are integral parts of the long-range program for University capital needs of the next decade.

For the biennium, the capital budget request included on the Columbus Campus:

- Replacement of an outmoded portion of McPherson Chemical Laboratory, \$8.2 million.
- Replacement of Ives Hall, the agricultural engineering building, \$5.2 million.
- A veterinary science facility, \$4.1 million.
- Second phase of the Cancer Center Research Laboratory, \$4 million.
- Utilities and renovation work, \$16.8 million.

At other campuses, the request included:

- Additional academic facilities and remodeling at the Agricultural Technical Institute, Wooster, \$5.2 million.
- Student recreation and service space, and some remodeling on the Marion Campus, \$1.5 million.
- Two additional Area Cooperative Extension Centers in north central and west central Ohio, \$1.1 million.

The biennial request also included some \$954,000 for elimination of barriers to the handicapped on all campuses. Not advanced as a specific proposal was a Cancer Institute, but administrators will discuss feasibility and possible funding for such a facility. Added later to the request was \$7 million for renovation and expansion of the University Hospitals' radiation therapy facilities.

For the periods to 1985 and to 1990, renovation needs continue to receive strong emphasis. From now to 1985 the University envisions reducing a backlog of renovation that has accumulated during the past two decades. Such work also must continue to 1990 and beyond while the University meets the maintenance and repair needs of a large physical plant developed mainly in the 1950s and 1960s. Indications are that about \$16 million per biennium, in 1978 dollars, will be required for needed renovation and the replacement of obsolete equipment and facilities. After the backlog has been



Historic Hayes Hall underwent a \$1.8-million renovation during the year. One of the University's earliest buildings, Hayes is listed on the National Register of Historic Places. Hayes is but one example of the University's need for renovation of existing facilities, a need that will continue into the 1990s.

OSU reduces energy use



Ohio State's efforts to conserve energy have resulted in savings of \$10.4 million in utility bills since the 1972-73 base year when conservation began. The University's energy conservation program has returned \$4.45 for every dollar spent on the program to date. Although the square footage of campus buildings rose 11 percent during the period, energy used per square foot dropped 35 percent. This reduction was brought about in the face of rising natural gas costs of 245 percent since 1972-73, 238 percent for fuel oil, and 80 percent for electricity. In terms of dollars for the 1977-78 year, the campus utility bill of \$8.3 million would have been \$12.2 million if the energy conservation program had not been in effect.

eliminated, \$10 to \$12 million per biennium will be needed to keep the physical plant functioning.

New construction after 1985 is foreseen as being based only on needs generated by programs requiring specialized facilities. For example, new emphasis on energy research in coal or new directions in the biological sciences could require new kinds of facilities.

The winter crises

The Winter of '78 brought together conditions that, for a time, threatened to close the campus. Record cold and snowfall, then a coal strike and a shortage of electricity combined to require campuswide emergency measures. Although these precautions eventually proved successful, President Enarson warned at one point, in February, that "a very real possibility" of closing loomed if further restrictions in electricity supplies were imposed. Through determined efforts on the part of many, essential services were maintained, and the Winter Quarter academic schedule was completed.

The snowstorms and blizzard that hit Ohio during January 16-29 paralyzed much of the state and became the first winter test of campus staff resourcefulness and dedication. For example, critical areas such as the hospitals and residence halls were kept supplied with food products by Food Facility workers despite the severe weather. University staff took over delivery duties from snowbound bread vendors. Physical Facilities personnel logged more than 2,000 overtime work hours at the height of the blizzard for snow and ice removal to keep traffic and personnel moving. Many employees spent day and night on the campus to maintain services.

In the wake of the blizzard came problems growing out of the national coal strike, which brought severe restrictions in use of electrical energy. Through its energy conservation programs in effect since 1972-73, Ohio State already had cut its energy use appreciably. Thus the campus was hard pressed to bring about further reductions. The University nevertheless was determined to achieve additional cutbacks in response to the governor's request for electricity savings of at least 25 percent.

Students, faculty, and staff cooperated fully in these efforts. Weekend activities were curtailed, and there was a 10 p.m. energy curfew for campus buildings. Room temperatures were lowered. A moratorium was put into effect for scheduling new nonacademic events. Nonacademic departments rescheduled work shifts, discontinued use of nonessential equipment, and reduced operating hours. The Energy Conservation Program monitored total energy use constantly.

All in all, the conservation efforts brought energy savings of 35 percent during February and March. By March 10, President Enarson could announce to students that Winter Quarter would be completed and Spring Quarter would open on schedule.

40,000 checks pay faculty, staff

One of the largest employers in central Ohio, the University carried 24,029 individuals, or a full-time equivalent of 17,047, on its payrolls last October. The Office of Personnel Services processed 40,000 checks a month to pay faculty and staff salaries totaling more than \$218 million for calendar year 1977.

Among major efforts within that office to develop new systems and approaches to personnel administration has been the administrative and professional classification and compensation program. The first phase of this effort was implemented for 1977-78 in response to a directive of the University Trustees.

The objective of the program is to ensure that individuals performing related or similar jobs are equitably paid. Nearly 4,700 individuals had their jobs classified, and 339 positions were reassigned to the Classified Civil Service.

Refinements continue to be made in the program, which has proved a useful structure for precisely defining salary and position classification goals.

Among the employment services provided on the campus, an internal advancement opportunities program has had success in filling some 25 percent of all posted vacancies through promotion or transfer of current faculty, or administrative, professional, or civil service staff.

The Professional Employment Services section is taking a greater part in recruiting and other efforts for instructional, administrative, and professional vacancies. One of its units handles training and development, and during the year, more than 1,400 persons took part in various programs developed or sponsored by this unit.

Affirmative action gets commendation

Department of Health, Education, and Welfare staff reviewed the University's compliance with federal affirmative action requirements. Ohio State's eligibility for federal funding was certified, and the conciliation agreement that resulted included a general commendation to the University for some of its good-faith affirmative action efforts. Under terms of the agreement, the University is undertaking an extensive self-study that will focus on availability of qualified women and minorities for employment, hiring goals and timetables, salary comparisons, personnel turnover, and other problems. A revised affirmative action plan was issued in January.



Efforts to recruit and hire qualified minorities and women continued as the Department of Health, Education, and Welfare reviewed the University's compliance with federal regulations. Ohio State was commended for some of its good-faith affirmative action efforts.



As the year came to a close, construction was nearing completion on a \$2.3-million physical education facility at the Newark Campus. A similar facility on the Mansfield Campus was completed and put into use during the year. In addition, funds were being sought for construction and remodeling on the Marion Campus.

Regional campus heads become deans

In March, the University's Mansfield Campus served as host for the Board of Trustees monthly meeting and, at the same time, provided the Trustees with a first-hand look at educational opportunities on that campus. To give greater recognition to the development of regional campuses and their relationship to the entire University, the Trustees approved a title change from director to dean and director for chief administrators of the campuses at Lima, Mansfield, Marion, and Newark.

The Trustees also acted to encourage cooperation between technical

colleges and regional campuses. The Trustees authorized a revision of agreements with the technical colleges, which are located on the regional campuses, with the aim of sharing facilities. Trustees of the technical colleges also were to be invited to join regional campus Citizen Councils in a joint conference committee for the Mansfield and Newark campuses.

Nearly 42,500 persons have launched their college careers at a regional campus. Each regional campus now has two to five academic buildings and more than 25 resident faculty members. More than 3,600 students enrolled at the four campuses during the year.

Medical practice plan proposed

In September President Enarson appointed an internal working group to draft a medical practice plan proposal. Members of the group were Dr. Howard D. Sirak, then vice chairman of the Board of Trustees; William E. Vandament, director of budget and resources planning; Kathryn T. Schoen, then associate provost for faculties; and Eric R. Gilbertson, executive assistant to the president.

After several drafts and after many discussions with medical faculty, a practice plan proposal received approval of the Board of Trustees in March for implementation by July 1, 1979. Members of the University Medical Society expressed opposition to the plan, and later in March a group of medical faculty brought legal action seeking to enjoin the University from putting it into effect. The matter remained before the Franklin County Common Pleas Court and U.S. District Court as the year ended.

Building public support for Ohio State

Building public understanding and support for the University is a task shared by all faculty, staff, and students. Within the Office of Public Affairs, communications to develop a positive awareness of the

University and its contributions took on several new dimensions. One change was the development of a community-relations program to monitor community activities of importance to the University, to inform key community groups of Ohio State's needs and services, and to involve and inform community leaders in order to build stronger ties. At the state level also, a governmental relations program continues to monitor the Ohio government activities that concern higher education and to communicate with public officials about issues affecting the University.

Plans were laid for a new quarterly tabloid to provide further understanding of Ohio State's missions in teaching, research, and public service to state and local leaders, alumni association members, Presidents Club members and other donors, and to faculty and staff.

In the area of research, a full-time writer was appointed in an effort to give greater visibility to and encourage wider understanding of this important part of the University's mission.

Serving Ohio news media, the broadcast staff of Communications Services produced "OSU Review," a biweekly radio magazine aired by more than 25 commercial stations. A monthly radio news feature service also is provided to an equal number of stations. A monthly one-hour television magazine program, which highlighted University people and events on WOSU-TV, was redesigned for 1978-79 as a television news service for commercial stations within Ohio.

Several special issues of the weekly publication, "OSU onCampus," helped to inform leaders throughout Ohio about the University and its work. Special issues were published on research, teaching, students, the arts, energy, business, and agriculture.

Other highlights

New trustee, vice presidents named

Important changes in the University's leadership occurred during the year. John L. Gushman of Lancaster completed his term as chairman of the Board of Trustees, and Dr. Howard D. Sirak of Columbus was elected to succeed him. Governor Rhodes appointed Daniel M. Galbreath of Columbus as a Trustee to succeed M. Merle Harrod of Wapakoneta, who completed a nine-year term on the Board.

Two changes occurred on the President's Staff as the result of retirements. In April, Kathryn T. Schoen, former associate provost for faculties, succeeded John T. Bonner Jr. as vice president for educational services and became the first woman to hold a vice presidency at Ohio State.

After the spring retirement of Richard Armitage as vice president for student services, the University announced the appointment of William R. Nester of the University of Cincinnati as his successor.

New deans were appointed for two colleges—James E. Meeks of the University of Iowa, dean of Law, and Diether H. Haenicke, Wayne State University, dean of Humanities. Professor Patrick R. Dugan was named acting dean, College of Biological Sciences, after the retirement of Richard H. Bohning.

Other appointments included: Robin S. Wilson and Arthur E. Adams, associate provosts; Dorothy W. Jackson and Terry Roark, assistant provosts; M. Masao Kinoshita, director, School of Architecture; G. Robert Holsinger Jr., acting director, School of Journalism; Robert E. Bailey, director, Program for Energy Research, Education, and Public Service; Douglas N. Jones, director, National Regulatory Research Institute; Michael J. Guralnick, director, Nisonger Center for Mental

Retardation; Joseph J. Lynch, director, Center for Medieval and Renaissance Studies; Marguerite A. Howley, director of food system support; James W. Kristoff, University treasurer; Donald E. Crawford, assistant vice president, Division of Continuing Education; Richard E. Payne, assistant to the vice president for Public Affairs; William J. Napier, director of government relations; William H. Hall, director of residence and dining halls, as well as 14 chairpersons of academic departments.

Outstanding teachers are honored

Eight faculty members were honored for their high levels of achievement with the 1978 Alumni Awards for Distinguished Teaching. Nominated by students and alumni and chosen by a faculty committee, the recipients were:

Charlette Gallagher, assistant professor of medical dietetics; W. James Harper, professor of food science and nutrition; Marlene Longenecker, assistant professor of English; Joseph Lynch, associate professor of history; George St. Pierre, professor of metallurgical engineering; Merritt R. Smith, associate professor of history; Gisela Vitt, associate professor of German; and Douglas Whaley, professor of law.

NCAA reviews compliance

A National College Athletic Association (NCAA) investigation of intercollegiate athletic programs, particularly football recruitment activities, reported that University staff had made serious efforts to comply with NCAA rules. In addition, the NCAA found that University staff did not hesitate to disclose violations when it was realized they had occurred. The NCAA confirmed a few errors in the football recruiting program and issued a reprimand. But its report did point out that an exhaustive investigation of the University's athletic program failed to find any pattern of serious or willful violation on the part of University staff or representatives.



The OSU women's tennis team ranked in the top 20 in the nation, as did the University's fencing, basketball, and golf teams. The women's synchronized swimming team won its second national championship in as many years, reflecting Ohio State's reputation for developing women's sports teams that are strong national competitors.

Women athletes build strong reputation

Reflecting growth in the women's athletic program were 59 full athletic grants-in-aid awarded to women, an increase of 30 over 1976-77. In 1978-79, a further increase will provide grants-in-aid for 82 women.

Ohio State's women athletes have been building a reputation as strong national competitors. For the second year in a row, the synchronized swim team won the national competition of the Association for Intercollegiate Athletics for Women. The fencing, basketball, golf, and tennis teams all ranked in the top 20 in the nation.

Financial review 1977-78

Inflation pressures continue

The University balanced its operating budgets during the 1977-78 fiscal year despite escalating inflation.

During the year inflation accelerated for higher education throughout the country. Prices paid by institutions for goods and services rose at a rate of 6.7 percent in fiscal 1978, compared with the rate of 6.5 percent experienced in 1977. Over the last decade, the cumulative effects of inflation are even more significant. For example, utilities that cost universities \$100 in 1967 now cost \$292.50.

At the same time, the value of the educational dollar received by universities has continued to decrease. In 1970-71, a typical full-time undergraduate student at Ohio State paid \$630 annually in instructional and general fees. For 1978-79, such a student will pay \$975, yet the University's actual purchasing power from these fees has dwindled to only about \$575. The recent history of the University's instruction and general budget, in current dollars and constant dollars corrected for inflation, is shown on page 27. In terms of constant dollars per student, the University's expenditures have actually decreased by 7 percent since 1970-71.

Effective use of resources

Progress toward maintaining financial stability in the midst of a fluctuating economy is not easy, but the University is fully committed to this goal. Therefore, emphasis will continue to be placed on increased productivity, improved

management, and more efficient operations to provide the dollars necessary to meet the needs of the University.

Productivity and staff development are two key factors in achieving effective use of limited resources. Each support area in the Office of Business and Administration is developing and refining productivity measures to evaluate results achieved against resources expended.

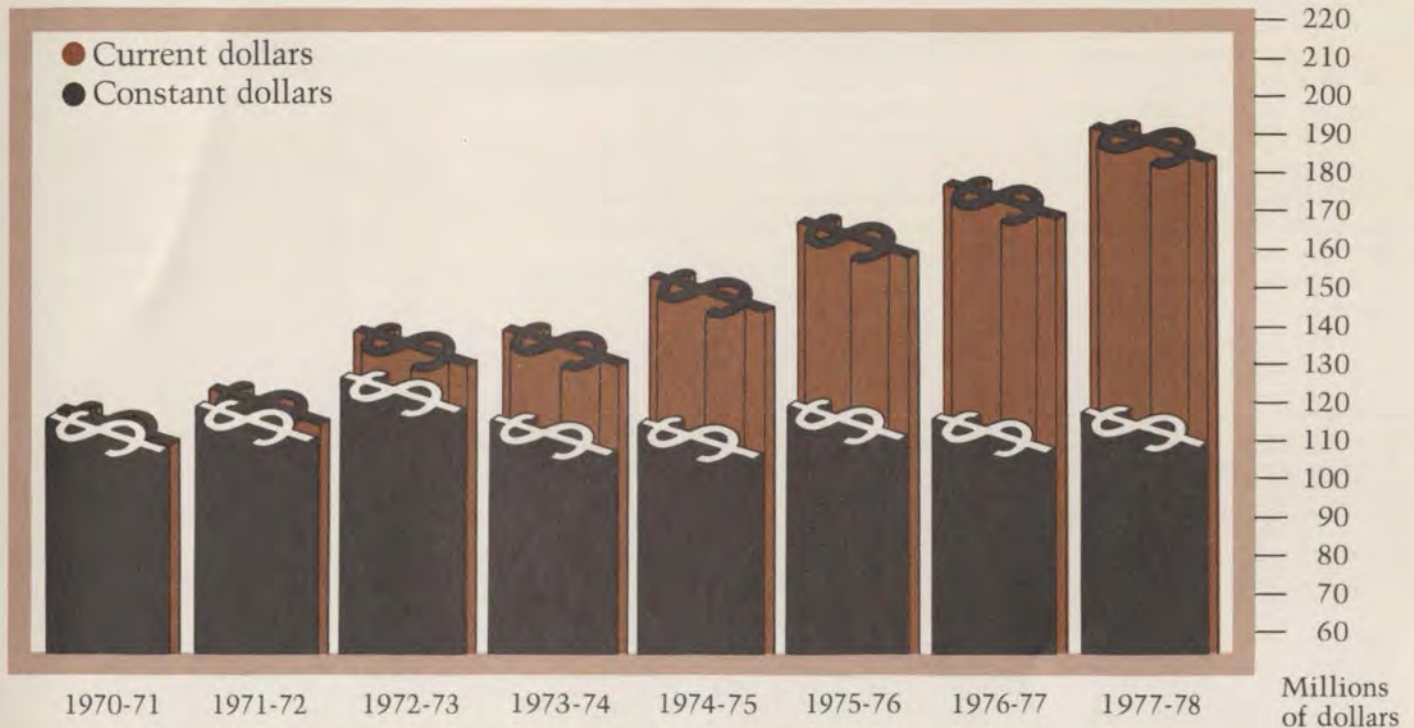
Management improvement programs have been designed to ensure effective use of the University's most important asset—our human resources. Among programs presented were seminars for senior administrators on approaches to improving the decision-making process, marketing strategies and techniques, and management communications as well as other seminars and workshops for middle-management and supervisory personnel.

The equipment replacement reserves program developed by Business and Administration is another example of the University's preparation for possible leveling off of funding and illustrates how planning can help offset inflation. The University recently received a National Association of College and University Business Officers (NACUBO) cost reduction incentive award for the program.

One measure of the plan's effectiveness is to be found in the University's recent computer acquisition. The funding plan involved the lease-purchase of computers through an outside financing firm at a rate lower than the University could receive from investing its funds. The projected five-year savings over the increased rental rate for the administrative computer used by the University was \$900,000 plus an equity in the machine of \$600,000.

The preceding programs, coupled with the major efforts to conserve energy described elsewhere in this report and the reallocation of resources among the University's programs, have helped the University adjust to its diminished purchasing power.

Effect of inflation on OSU budget



Development of the 1977-78 budget

As the 1977-78 budgeting process developed, it became clear that because of the continued inflationary pressures mentioned previously, state funding could not be expected at levels that would meet simple continuation needs. Thus the final document necessarily had impact on three interrelated factors—program services offered, faculty and staff salaries, and student fees.

During the previous year, cost-cutting had been necessary to meet a mandated 1 percent executive cut imposed by the governor on all state agencies. The resulting reductions in college and office budgets were carried forward into the next year as continuing base budget changes for the University's 1977-78 operations. Because graduate enrollments were below the budgeted levels of 1976-77, still other selective cuts had to be made in several college budgets before providing funds for salary increases and other inflationary costs.

All in all, some \$3.1 million was generated in internal savings.

Salary increases were set at 5.7 percent which served partially to offset the projected rise in the cost of living of 6 to 7 percent. An additional 5 percent was earmarked as an inflationary adjustment to meet other cost increases.

The budget also encompassed student instructional fee increases of \$15 per quarter for undergraduates, \$20 for graduate and law students, and additional increases for other students as well as an increase of \$10 per quarter in the general fee. Despite the higher fees, the Office of Budget and Resources Planning noted that under the new budget, fee income would represent a smaller share of the Instruction and General budget, 28.4 percent, as compared with 33.8 percent in 1970-71. This still places the University well above the average major public university in the costs of education borne by students.

Inflation accelerated at a higher rate during the year than was provided for in the University's budgets. While OSU's appropriations and other income have grown since 1970, they have not kept pace with the rate of inflation as measured by the national cost index for higher education. Thus, when compared in constant dollars per student, the University's instruction and general expenditures have decreased by 7 percent since 1970-71.

Financial accounting system

The University's new financial accounting system, which went into operation in July 1977, has proved to be an effective tool for improving management and cost control. The first year of operation offered opportunities to identify and correct problems as well as to design additional requirements, generate requested reports, and aid University departments in making better use of the system's capabilities.

A major focus during the next year will be to use the system to achieve more efficient budgetary control throughout the University. In other University areas, additional systems are being investigated to further support the new accounting system. Under study are a compatible accounts payable system, revision of the payroll distribution system, and expansion of the Student Financial Aid and Student Aid accounting systems.

Investment guidelines are adopted

In April, the Board of Trustees adopted a new investment policy, recommended by the University administration, which requires the University to survey corporations in which stock is held to gather information specifically related to their foreign operations. This action was taken to ascertain the

employment practices these corporations exercise in their overseas operations. The "Sullivan Principles" are serving as a general guideline in these efforts, and survey responses will determine the extent to which each corporation's employment practices comply. Currently, more than 100 United States firms and 50 universities have endorsed the Sullivan Principles.

While the principles deal specifically with eliminating apartheid practices in South Africa, this University is firmly committed to influencing the establishment of equitable employment practices worldwide. The nature of each corporation's foreign operations will be monitored to determine what steps are being taken to implement the Sullivan Principles or similar standards concerning employment practices. If it is determined that a corporation has no intention of establishing fair employment practices, the Board of Trustees may authorize divestiture of University holdings as long as there is no financial liability associated with such action.

Grants, gifts increase

Grants and contracts awarded to the University rose 20 percent for the year to \$63,890,143. State and federal contracts and grants totaled \$55,969,125 and were 17 percent higher than in the previous year. Private grant awards were up 53 percent to a total of \$7,921,018.

Funds derived from private gifts make up a significant part of the University's income, and contributions through the Development Fund again set a record. The fiscal year brought pledged gifts totaling \$10,545,195, an increase of 8 percent over the previous year's level. The number of individual donors rose by more than 8,000 to 51,906.

Contributions in the annual giving category were 34 percent higher at \$1,245,846. Major resources contributions were up 5 percent to \$9,299,349. The increased funds provided by these gifts are particularly helpful as the purchasing power of other University resources has eroded.

Gifts enhance academic program

The University late in the year outlined a new Development Fund program to be aimed at academic enrichment of teaching and research areas selected as having high potential. Efforts will focus primarily on seeking gifts from individuals, corporations, and foundations to establish endowed chairs and named professorships and to achieve other designated purposes.

Bringing a new surge of energy to the Fund are appointees to two volunteer leadership positions. J. Wallace Phillips, prominent Columbus real estate attorney and developer with the John W. Galbreath Company, was elected chairman of the Development Fund Board of Directors. He succeeded retired chairman Edward F. Wagner whose work helped increase fund-raising activities dramatically.

John W. Kessler, well-known Columbus businessman, was named chairman of the Executive Committee of The Presidents Club. Kessler replaces Everett D. Reese, who retired after serving as chairman since the Club's inception in 1963.

Several major gifts during the year provided funds to support endowed chairs and professorships for distinguished scholars. These included:

- The John W. Galbreath Chair in Real Estate, established in honor of the internationally known realtor with gifts from members and friends of the Ohio Association of Realtors.
- The S. Robert Davis Chair of Medicine, made possible with a donation by Davis.
- The Ervin G. Bailey Chair in Energy Conversion in the Department of Mechanical Engineering, made possible with a bequest from Bailey. Robert H. Essenhigh, professor of fuel science at Pennsylvania State University's Combustion Laboratory, was named to the chair.



- The Ernst & Ernst Professorship in Accounting, established to honor Richard T. Baker, alumnus and retired managing partner of the international accounting firm with a gift from the firm to underwrite the faculty post for a minimum of 10 years.

- The James W. Shocknessy Professorship of Law, made possible by a bequest from the former Trustee and director of the Ohio Turnpike Commission. Robert J. Lynn, professor of law, was appointed to the chair.

New appointments to previously established endowed chairs and professorships included:

- Dr. Robert L. Perkins, professor and director of the Division of Infectious Diseases, to the Frank E. and Mary W. Pomerene Professorship of Medicine.

- Richard T. Stout, freelance writer, editor, and political consultant, to the Willard M. Kiplinger Chair in Public Affairs Reporting in the School of Journalism.

- Albert Shapero, professor of management at the University of Texas at Austin, to the William H. Davis Professorship in the American Free Enterprise System in the College of Administrative Science.

- Dr. Richard H. Nuenke, associate professor of physiological chemistry, to the Harry C. and Mary Elizabeth Powelson Professorship of Medicine.

Outstanding teachers are a great asset to the University. Today's faculty members face new challenges in the classroom as they work with new kinds of students — older students, people who hold jobs, the handicapped, homemakers returning after years away, or those who come from disadvantaged backgrounds. To meet such challenges, Ohio State needs outstanding teachers who excite their students and who direct their prestige and research knowledge to the benefit of Ohio, the nation, and OSU.

Balance sheet

Assets

June 30, 1978

Current funds

Thousands of dollars

Educational and general

Cash and investments	\$ 5,521
Accounts receivable	4,946
Inventories	5,524
Due from endowment and similar	26,965
Due from loan funds	170
Other assets	830
	<u>\$ 43,956</u>

Auxiliary enterprises

Cash and investments	\$ 11,093
Accounts receivable	15,027
Inventories	4,423
Due from endowment and similar	316
Other assets	2,156
	<u>\$ 33,015</u>

Sponsor designated

Cash and investments	\$ 1,610
Accounts receivable	5,194
Due from endowment and similar	11,422
	<u>\$ 18,226</u>

Total current funds

\$ 95,197

Student loan funds

Cash	\$ 2,262
Notes receivable	34,762

\$ 37,024

Endowment and similar funds

Cash	\$ 1,370
Investments	
Stocks	21,868
Real estate	4,438
Corporate securities	73,465
Federal securities	17,920
Accounts receivable	214

\$119,275

Plant funds

Unexpended

Cash and investments	\$ 23
Receivables	12,751
Due from current funds	1,723
Retirement of indebtedness	6,703
Renewals and replacements	22,837
Investment in plant	598,250

\$642,287

Agency funds

Cash	\$ 151
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\$ 151

Total assets

\$893,934

Liabilities and fund balances

June 30, 1978

Current funds

Thousands of Dollars

Educational and general

Accounts payable	\$ 8,584
Accrued salaries and other liabilities	10,365
Deferred income and deposits	6,157
Fund balances	
Allocated	17,334
Unallocated	1,516
	<u>\$ 43,956</u>

Auxiliary enterprises

Accounts payable	\$ 3,423
Accrued salaries and other liabilities	1,983
Deferred income and deposits	4,796
Due to plant funds	77
Fund balance	
Allocated	22,736
	<u>\$ 33,015</u>

Sponsor designated

Accounts payable	\$ 563
Accrued salaries and other liabilities	298
Due to plant funds	1,723
Deferred income and deposits	1,377
Fund balance	14,265
	<u>\$ 18,226</u>

Total current funds

\$ 95,197

Student loan funds

Due to current funds	\$ 170
Fund balance	36,854

\$ 37,024

Endowment and similar funds

Mortgage payable	\$ 241
Due to current funds	38,702
Due to plant funds	19,335
Fund balances	
Endowment principal	59,670
Annuity and life income	1,327

\$119,275

Plant funds

Unexpended

Accounts payable	\$ 1,111
Buildings and renovations	13,386
Retirement of indebtedness funds	6,703
Renewals and replacements funds	22,837
Investment in plant	
Bonds payable	43,911
Net investment in plant	554,339

\$642,287

Agency funds

Deposit held in custody for others	\$ 151
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\$ 151

Total liabilities and fund balances

\$893,934

Current funds: sources and uses

Sources

July 1, 1977 to June 30, 1978

Educational and general

Thousands of dollars

Student fees and charges	\$ 60,182
State subsidy and grants	122,621
Federal subsidy and grants	46,406
Other government grants	6,321
Private gifts and grants	11,500
Departmental sales	13,548
Investment income	5,707
Other	<u>1,795</u>

Total educational and general \$268,080

Auxiliary enterprises \$121,343

Total current sources \$389,423

Uses

July 1, 1977 to June 30, 1978

Educational and general

Thousands of dollars

Expenses

Instruction	\$124,051
Research	25,314
Public service	37,383
Academic support	23,096
Administrative support	15,494
Physical facilities support	23,564
Student services	9,891
Student aid	5,203
Net transfers to other funds	2,508
Other	<u>1,576</u>

Total educational and general \$268,080

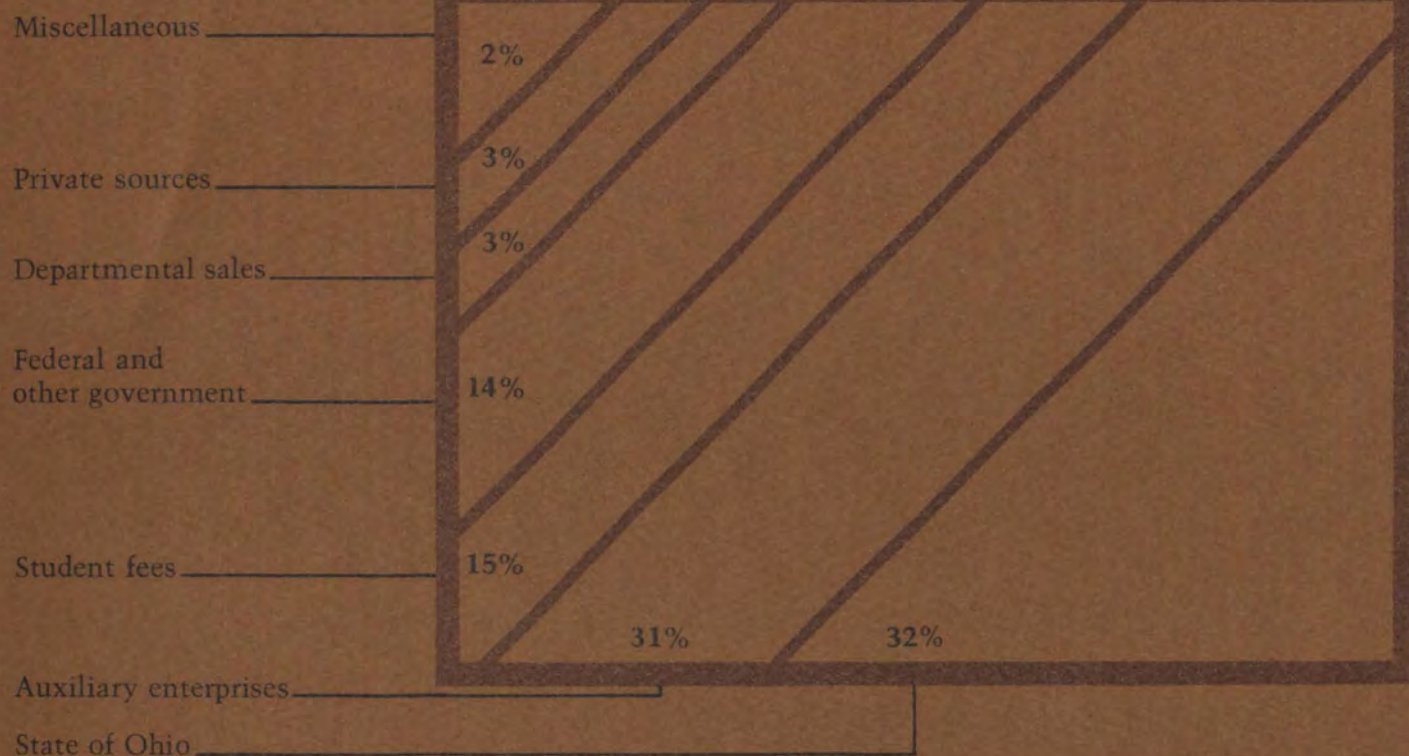
Auxiliary enterprises

Expenses	\$112,836
Net transfers to other funds	<u>8,507</u>

Total auxiliary enterprises \$121,343

Total current uses \$389,423

Sources



Uses

